Instructions for Converting Map Background Shapefiles to Ascii Format for Importing into WHFS

The AWIPS Map Background folks have developed a utility for use within Arcview which enables a user to convert a shapefile into an ascii format, which can then be imported into WHFS. The obvious benefit of this approach is that you now have control over what your map backgrounds look like. The one major assumption in this approach is that you have access to Arcview in your office.

To download and install the utility:

1. Go to the AWIPS Map Database web site (http://www.awips.noaa.gov/mapdata/newcat).

2. Click on the AWIPS Map Database Catalog link. This will take you to a page listing various shapefiles and formats.

3. Scroll down to Utilities/Tools and click on the Data Conversion, Map Editing Utilities link.

4. Click on the AWIPS Map Editing Tools! Link.

5. Scroll down to the Shapefile/Ascii converter and download the appropriate extension.

6. Download the zipped (compressed) extension to ../esri/Av_gis30/Arcview/Ext32 and unzip it.

To use the utility:

1. Open Arcview and display the View with your desired Themes.

2. From the File menu, choose "Extensions...". You'll get a scrollable list of extensions.

3. Scroll down and select "Hydro shapefile converter". Click OK. A menu option labeled "Hydro" will appear on the right side of the main menu. Help on the utility is available under the menu/button as "Help".

4. From the "Hydro" menu, select the shp2ascii option. This is the extension that will convert the Arcview shapefile to ascii. A popup window will appear.

5. Check the box labeled HFS Format, and click the Begin button.

6. There will follow a series of pop-up windows in which you will need to make choices:

    a. **Choose a theme**: Select the theme (shapefile) you wish to convert.
    b. **Select ID field for export value**: From the drop down menu, select the desired ID field. The options in the ID field are based on the fields in the attributes table of your theme.
    c. **Select NAME field for export file**: From the drop down menu, select the desired ID field. The options in the ID field are based on the fields in the attributes table of your theme.
    d. **Choose the filename and directory** in which to store the ascii file

7. If you get the error: "lon field missing", check your theme's attribute table to make sure attribute fields exist for latitude (Lat) and longitude (Lon), which are used for the CTRLAT and CTRLON variables* to define the centroid of the basin. If you do not have lat/lon attributes, then download another extension called AVTOOLS from the same AWIPS Map Database Catalog - AWIPS Map Editing Tools! website. After installing, select the "Arcview Tools" extension, and run option "addxy", which will add the centroid lat/lon of the basins to the attributes table.

Once the Ascii file has been created, you'll need to transfer it from the platform where Arcview resides to AWIPS–most likely an ftp process through the LDAD firewall. This should be a similar process to how the map backgrounds are updated on the D2D. On AWIPS, the Ascii files should be stored in the /awips/hydroapps/whfs/local/data/geo directory. From here, they can be imported into the database, using the import utilities found in the Hydrobase Setup/Areal Definitions and Vector Definitions menu options.

*The format of the Ascii file which is imported into the hydro database for use as map backgrounds in Hydroview is as follows:

```
ID   NAME    -1    N    CTRLAT   CTRLON
Lat1/Lon1
Lat2/Lon2
Lat3/Lon3
.
.
.
LatN/LonN
ID   NAME    -1    N    CTRLAT   CTRLON
Lat1/Lon1
Lat2/Lon2
Lat3/Lon3
.
.
.
```

LatN/LonN
.
.
.

Where:

ID - ID of the areal/linear entity, cannot be greater than 8 characters
NAME - name of the areal/linear entity (e.g. zone, county, river)
N - number of lat/lon pairs that define the areal/linear entity
CTRLAT - center latitude of the areal entity
CTRLON - center longitude of the areal entity
As described in section E above, you will have the choice of defining which of the shapefile attributes are used for the ID and NAME section.